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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,287	07/18/2002	Konstantinos Samaras	Samaras 7-5-7	1491

7590

08/05/2003

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EXAMINER

DUONG, FRANK

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/980,287

Applicant(s)

SAMARAS ET AL.

Examiner

Frank Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/29/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. This Office Action is a response to the preliminary amendment dated 11/29/2002.

Claims 1-14 are pending in the application.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statement filed 11/29/01 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. It has been considered and placed in the application file.

Drawings

4. Figures 15(a)-15(d) and 21 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1-14, the claims are narrative in form and do not contain positively recited steps of a specific process. Therefore, they are judged to be indefinite. Note that method claims should set forth a series of steps in the active terms in an instruction-like manner thereby reciting an actual method. **Dependent claims should further limit base claims by reciting additional steps in a like-wise fashion.**

Exparte Erlich 3USPQ2d 1011 at 1017[6].

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Klein et al (FRAMES Multiple Access Mode 1-Wideband TDMA with and without Spreading, WAVE OF THE YEAR 2000+ PIMRC. THE IEEE INTERNATIONAL SYMPOSIUM ON

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PERSONAL, INDOOR AND MOBILE RADIO COMMUNICATIONS, TECHNICAL PROGRAMS, vol. 1, 1 January 1997, pages 37-41, XP00209462) (hereinafter "Klein").

Regarding **claim 1**, in accordance with Klein reference entirety, Klein discloses a method of transmitting in time slots in TDMA frames user data in burst (see page 50, Figure 1) of GSM format (see page 37, right column, section III to page 38, left column, first two paragraphs), each burst comprising data portions (*Data symbols*) separated by a training sequence (*Training sequence*), wherein a first data portion (*Data symbols before Training sequence depicted in Figure 1*) of a burst before the training sequence is used for data of a first user and a second data portion (*Data symbols after Training sequence depicted in Figure 1*) of the burst after the training sequence is used for data of a second user (note: on page 38, left column, second paragraph, Klein discloses the bursts within a time slot can be allocated to different users or partly or all to one and the same user).

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales discussed above), Klein further discloses each data portion is transmitted in a sub time-slot allocated to a different user (see page 48, left column, first two paragraphs, Klein discloses the bursts within a time slot can be allocated to different users or partly or all to one and the same user (first paragraph) or different number of users per time slot (second paragraph)).

Regarding **claim 3**, in addition to features recited in base claim 2 (see rationales discussed above), Klein further discloses in which user data is transmitted in each time

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slot in a burst structure, user data being transmitted in each sub time slot in a corresponding burst structure (*see page 38, left column, first two paragraphs*).

Regarding **claim 4**, in addition to features recited in base claim 3 (see rationales discussed above), Klein further discloses in which the user data is transmitted in each time slot in a burst structure having n bits and wherein each time slot is partitioned into m sub time slots, user data being transmitted in each sub time slot in a corresponding burst structure n/m bits (*see page 37, right column, section III and page 39, left column, last paragraph corresponding to Figure 4 and table 2*).

Regarding **claim 5**, in addition to features recited in base claim 3 (see rationales discussed above), Klein further discloses in which the user data comprises speech (*see Fig. 1; 1/64 Non-spread speech burst 1*).

Regarding **claim 6**, in addition to features recited in base claim 1 (see rationales discussed above), Klein further discloses in which the TDMA system is an EDGE packet switched network (*see page 37, left column, first paragraph and page 39, right column, last paragraph of section IX, Klein discloses the TDMA system is a packet switched network*).

Regarding **claim 7**, in addition to features recited in base claim 6 (see rationales discussed above), Klein further discloses in which the TDMA system is a wireless system (*see page 40, left column, first paragraph, Klein discloses the system is a wireless system*), wherein in up-link data from p users is encoded such that each forms $1/p$ of an RLC/MAC block, wherein the data from each user is encoded into a respective one of p sub-time-slots (*see page 39, section VIII in reference to table 2 and Figure 4*

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and section IX, Klein discloses how a service is mapped into a physical channel comprising: channel coding; puncturing and interleaving and modulating; and how an RLC/MAC PDU is mapped onto four frames of layer 1. The recitation thereof inherent teaches the claimed limitation in a manner set forth).

Regarding **claim 8**, in addition to features recited in base claim 7 (see rationales discussed above), Klein further discloses wherein the RLC/MAC block is transmitted over four TDMA frames (see page 39, section VIII and IX, Klein and Figure 4 on page 41, Klein shows how an RLC/MAC PDU is mapped onto four frames of layer 1).

Regarding **claim 9**, in addition to features recited in base claim 1 (see rationales discussed above), Klein further discloses wherein the user data is encoded into an RLC/MAC block for transmission, the RLC/MAC block being transmitted in a sub-time-slot over a plurality of frames (see pages 37-38, section III and page 39, sections VIII-IX and Figure 4).

Regarding **claim 10**, in addition to features recited in base claim 1 (see rationales discussed above), Klein further discloses in which user data associated with at least two users is encoded into a single RLC/MAC block, the portions of the RLC/MAC block associated with respective users being transmitted in respective sub-time-slots (see pages 37-38, section III and page 39, sections VIII-IX and Figure 4).

Regarding **claim 11**, in addition to features recited in base claim 1 (see rationales discussed above), Klein further discloses in which the user data is transmitted in each time slot in a burst structure having n bits and wherein each time slot is partitioned into m sub time slots, user data being transmitted in each sub time slot in a

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corresponding burst structure n/m bits (see page 37, right column, section III and page 39, left column, last paragraph corresponding to Figure 4 and table 2).

Regarding **claim 12**, in addition to features recited in base claim 11 (see rationales discussed above), Klein further discloses in which the user data comprises speech (see Fig. 1; *1/64 Non-spread speech burst 1*).

Regarding **claim 13**, in addition to features recited in base claim 12 (see rationales discussed above), Klein further discloses in which the TDMA system is a wireless system (see page 40, left column, first paragraph, *Klein discloses the system is a wireless system*), wherein in up-link data from p users is encoded such that each forms $1/p$ of an RLC/MAC block, wherein the data from each user is encoded into a respective one of p sub-time-slots (see page 39, section VIII in reference to table 2 and Figure 4 and section IX, *Klein discloses how a service is mapped into a physical channel comprising: channel coding; puncturing and interleaving and modulating; and how an RLC/MAC PDU is mapped onto four frames of layer 1. The recitation thereat inherent teaches the claimed limitation in a manner set forth*).

Regarding **claim 14**, in addition to features recited in base claim 1 (see rationales discussed above), Klein further discloses wherein the RLC/MAC block is transmitted over four TDMA frames (see page 39, section VIII and IX, *Klein and Figure 4 on page 41, Klein shows how an RLC/MAC PDU is mapped onto four frames of layer 1*).

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Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Frodigh et al (USP 5,909,469).

Rikkinen et al (UPS 6,031,827).

Pons et al, ON THE APPLICATION OF LINK ADAPTATION CONCEPTS TO GSM, IEEE, pages 1219-1223, 1998.

ITU, TR45.3, THE UWC-136 RTT CANDIDATE SUBMISSION, pages 1-231, June 1998.

8. The USPTO is participating in a search exchange pilot program with the European Patent Office (EPO). As part of the pilot program, the USPTO has received a copy of the Search Report prepared by the EPO on the counterpart EP application for which priority under 35 U.S.C. 119(a) is claimed. The references cited in the EPO Search Report have been considered by the examiner and have been listed on the PTO-892 form. A copy of these references is not being furnished to applicant with this Office action. It will not be necessary for applicant to submit these references in an information disclosure statement.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is (703) 308-5428. The examiner can normally be reached on 7:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone numbers